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A DESCRIPTION OF AMERICAN COLLEGE FRESHMEN.

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THE AMERICAN COLLEGE SURVEY WAS ADMINISTERED TO 12,432 COLLEGE FRESHMEN AT 31 DIFFERENT INSTITUTIONS TO OBTAIN A MORE COMPLETE PICTURE OF THE TYPICAL COLLEGE STUDENT AND THE VARIATION AMONG STUDENTS FROM COLLEGE TO COLLEGE. THE AMERICAN COLLEGE SURVEY CONTAINS 45 SCALES WHICH CAN BE SCORED TO ASSESS STUDENT INTERESTS, POTENTIAL FOR VARIOUS ACHIEVEMENTS, ATTITUDES, AND OTHER ORIENTATIONS. STUDENTS ALSO PROVIDED INFORMATION ABOUT THEIR EDUCATIONAL AND ECONOMIC ASPIRATIONS, LIFE GOALS, SELF-RATINGS OF PERSONAL TRAITS AND ABILITIES, VOCATIONAL CHOICES, AND BACKGROUNDS. HIGH SCHOOL GRADES AND AMERICAN COLLEGE TESTING PROGRAM (ACT) SCORES WERE ALSO USED. ANALYSIS OF THE DATA REVEALED--(1) MALE FRESHMEN SHOW MORE DIVERSITY IN VOCATIONAL CHOICE AND MAJOR FIELD THAN DO WOMEN, (2) FRESHMEN HAVE HIGH ASPIRATIONS REGARDING FUTURE VOCATIONAL ACHIEVEMENT, (3) FRESHMEN ARE CONCERNED WITH THEIR INTERPERSONAL RELATIONS AND PERSONAL COMFORT, (4) MEDIAN FAMILY INCOME WAS $8,400 FOR MALES AND $8,700 FOR FEMALES, (5) FRESHMEN ARE COMMITTED TO A RELATIONSHIP WITH ONLY ONE MEMBER OF THE OPPOSITE SEX, (6) LIFE GOALS AND ASPIRATIONS OF STUDENTS DIFFER BETWEEN COLLEGES, AND (7) POTENTIALS FOR ACADEMIC AND EXTRA-CURRICULAR ACTIVITIES DIFFER AMONG STUDENTS AT DIFFERENT COLLEGES. THIS IS ACT RESEARCH REPORT NO. 1, MARCH 1965. (SK)

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ACT

RESEARCH REPORTS

A DESCRIPTION OF AMERICAN COLLEGE FRESHMEN

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March, 1965 No. 1

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References

I. Introduction

The increasing interest in higher education by the general public and the burgeoning studies of colleges and universities have emphasized the need for comprehensive information about the typical college student and about the variation in students or student bodies among institutions. On the one hand, students want to know how well they will fare at Gothic as opposed to Mid-State College. On the other hand, educational researchers want to develop a knowledge of colleges and their effects upon student growth and achievement, and administrators want to create better colleges.

Earlier studies of college students by Learned and Wood (1938), McConnell and Heist (1962), Astin (1964), and others have made it increasingly clear that American colleges attract extremely diverse groups. Such surveys and assessments reveal great student differences in educational and vocational goals, interests, potentials for academic work and originality, family background, attitudes, and values. This relatively new information about college students has served several purposes: Since colleges do vary in great degree, we now have some of the important information which a student needs to make a satisfying choice of college. Astin's report, "Who Goes Where to College" is perhaps the first systematic and objective attempt to put this new knowledge in a comprehensive and useful form for students.

Our growing knowledge of college students has also served to emphasize the need for reinterpreting older studies of college effects in view of the kinds of students a college attracts. Generally, colleges with good reputations for their beneficial effects upon students also have a substantial yearly influx of talented students. Beneficial effects may then be only the consequence of selection of talented students. In the last five years, the acceptance of this simple axiom has led to studies of higher quality as researchers began to control for the kind of students a college attracts in the freshman year. Without such controls, no explicit examination of a college's influence can be made.

The range of student differences among colleges on almost any characteristic emphasizes the need for greater congruence between institutional planning and student potentials for learning, growth, and achievement. For despite the variation in student differences, colleges have not yet taken full advantage of our current knowledge of students. This situation exists partly because constructive action requires both a complete delineation of student knowledge and an explicit study of the implications of such knowledge.

The present study is an attempt to obtain a more complete account of the typical American college student and the variation among students from college to college. To accomplish this task, a comprehensive assessment, the American College Survey, was administered to 12,432 college freshmen in 31 institutions. In addition to its initial descriptive value the American College Survey was planned to serve several practical and scientific purposes: First, participating institutions will receive extensive descriptive information about their freshman class which they can use to reexamine their current admissions and educational programs. Second, the American College Survey will provide the basic information for a series of coordinated scientific studies in the areas of achievement, careers and curricula, student growth and development, institutional climates, and conservation of student potentials. And finally, the American College Survey will be used as a way to develop student assessment techniques for use in the American College Testing Program. In the 1964-65 ACT program, the ACT test booklet contains a section called The Student Profile, a brief student information blank. Those findings, techniques, and scales in the American College Survey which prove to have value in the admissions process will be incorporated in successive revisions of the Student Profile Section. In this way, ACT's developmental research will support the operation of its national student assessment program.

The student information obtained in this national assessment has been organized in the following sections: The Colleges and Their Students (a description of the student sample and their colleges); The Student Survey (a description of the American College Survey, its administration, item content, and scales); The Typical College Student (a summary of the results for the average student), The Variation Among Colleges, and Educational Implications.

II. The Colleges and Their Students

This section describes the colleges and students who participated in the survey. Although we did not obtain a random sample of American college students, we did obtain a reasonable approximation of the American college freshman.

The Colleges

Perhaps the single most important characteristic of American colleges is their diversity. Statistics compiled by the U. S. Office of Education (1964) indicate that in the 1963-64 academic year there were more than 2000 accredited junior colleges, colleges, and universities in the United States, and that if these institutions are separated into groups only by the highest degree offered and by type of program (e.g., liberal arts, engineering, etc.) offered, there are as many as fifty different kinds of institutions. The goal in the selection of colleges for this study was to obtain a sample which would illustrate this diversity among American colleges. A random sample of colleges would not be useful for this purpose.

Thirty-one colleges were finally included in this study. These colleges, and the states in which they are located are listed in alphabetical order in Table 1. Of these colleges, six were junior colleges, seven were four year undergraduate colleges, and eighteen were universities in the sense that they offered at least the Masters degree. The enrollments ranged from 272 to 17,394, with a median enrollment of 1467 students. With respect to geographical distribution, nine colleges are located in the Northeast, six in the South, seven in the Midwest, eight in the Rocky Mountains and Great Plains states, and one on the West coast. Among the 31 colleges, 28 were coeducational, 2 were women's colleges, and 1 was a men's college.

Some data about the average intellectual ability of students at each of these colleges are available from the test scores of college applicants who took the regular ACT test battery in the year 1963-64 and had their test scores sent to that college. Unpublished ACT research indicates that there is a median correlation of about .90 between the average scores of applicants who have their scores sent to a given college and the corresponding average score of freshmen who actually enter that college. Thus, scores of applicants to a college are a good estimate of the average intellectual ability of the student body.

The ACT battery yields four subtest scores, which are averaged to obtain an overall Composite score. Each of these scores is on a common scale with a mean of approximately 20 for college-bound high school seniors and a standard deviation of about 5. The Composite score appears to be the best overall measure of general academic aptitude, and was therefore used in making comparisons in this study. Thirty of the thirty-one colleges had at least ten applicants who submitted ACT scores. Average Composite scores of applicants to these colleges ranged from 16.30 to 27.44 with a median of 20.06.

To summarize, in our sample of colleges there is wide variation in college type, student enrollment, geographical region, and intellectual ability of the student body. The only obvious bias is that West Coast colleges are markedly under-represented. The median enrollments and the average intellectual ability of our sample are close to the national figures. It appears, therefore, that we attained our goal of a reasonable cross-section of American colleges.

The Students

The American College Survey was administered to freshmen in the thirty-one colleges in the months of April or May in 1964. Students filled out the survey in English classes, chapels, and convocations or in dormitories and their homes. College officials were polled to learn if the administration of the survey produced any difficulties. Generally, they reported that no special problems resulted from the administration of the survey.

Completed usable questionnaires were obtained from 12,432 freshmen, of whom 6289 were men and 6143 were women. Several additional statistics can be cited which describe the overall characteristics of these students: Seven per cent were enrolled in junior colleges, twelve per cent in four year undergraduate colleges, and eighty-one per cent in universities offering at least one graduate degree. Approximately 15 per cent of these freshmen were students in private colleges, while 85 per cent were students in public colleges. About 95 per cent attended coeducational colleges. Finally, 20 per cent were enrolled in colleges in the Northeast, 31 per cent in colleges in the South, 20 per cent in colleges in the Midwest, 26 per cent in colleges in the Mountains and Plains states, but only 3 per cent in colleges on the West Coast. From these figures it would appear that students in coeducational colleges are somewhat over-represented and students in West Coast colleges are considerably under-represented in our sample. Nevertheless, the overall impression given by this information is again that we attained a reasonable cross-section of American college freshmen in 1964.

The number of freshmen and the percentage of the freshman class participating in the American College Survey varied greatly from college to college. At one extreme, 96 per cent of the Burlington Community College freshmen participated, while at the other Colorado State College submitted a selected sample of 22 per cent of their freshmen. Table 1 summarizes the rate of participation for each college.

A brief survey of the college officials who administered the American College Survey indicated that these variations in participation were more a function of administrative conditions than student cooperation. In addition, college officials generally reported no discernible differences between participants and non-participants. On the other hand, there is now an impressive array of studies which demonstrate that when participation is voluntary, participants are typically quite different from non-participants in surveys and psychological experiments (Norman, 1948; Rosen, 1951; and Wallin, 1949). Therefore, although higher rates of participation probably produced more accurate descriptions of the total freshman class, only the individual college can estimate the representativeness of its sample.

Table 1

The Participating Colleges and the Per Cent of their Freshmen Who Responded to the American College Survey

College	State	Men	Women	% of Total Fresh. Class
Arkansas Polytechnic College	Arkansas	155	94	34
Baylor University	Texas	207	273	44
Black Hills Teachers College	South Dakota	102	74	46
Bloom Township Community College	Illinois	102	46	70
Burlington Community College	Iowa	135	72	96
California State College at Hayward	California	144	186	60
Carthage College	Wisconsin	33	89	44
Colorado State College	Colorado	62	172	22
Fairmont State College	West Virginia	187	152	76
Glassboro State College	New Jersey	178	529	80
Indiana State College	Indiana	233	333	28
Jamestown Community College	New York	77	83	64
Kansas State University	Kansas	641	511	73
Lyons Township Junior College	Illinois	50	53	57
Mount Mercy College	Pennsylvania	--	150	91
New Mexico State University	New Mexico	198	81	29
Plymouth State College	New Hampshire	59	115	72
Snow College	Utah	82	63	49
Southeastern State College	Oklahoma	143	107	62
Southern Connecticut State College	Connecticut	147	398	77
Southern Illinois University	Illinois	762	363	33

Table 1 (cont.)

College	State	Men	Women	% of Total Fresh. Class
Springfield College	Massachusetts	145	85	54
Swarthmore College	Pennsylvania	69	50	44
University of Alabama	Alabama	429	387	43
University of Kentucky	Kentucky	711	616	63
University of North Dakota	North Dakota	226	272	49
University of Tennessee	Tennessee	597	474	47
Wesleyan University	Connecticut	287	--	94
Westbrook Junior College	Maine	--	169	81
William Carey College	Mississippi	30	47	47
William Jewell College	Missouri	98	99	81
Total Students		6289	6143	

III. The Student Survey

The assessment device used to estimate various student characteristics was called the American College Survey (1964). The American College Survey is a booklet which contains a letter explaining the purpose of the survey and a series of sections planned to elicit a student's achievements, aspirations, attitudes, interests, potentials, values, and background. Students recorded their 1004 responses on two special answer sheets. There were no free response items.

The American College Survey is based on the National Merit Student Survey (1962) and related surveys. The American College Survey differs from earlier forms of the National Merit Student Survey in several ways. New scales were added, some scales were revised, and other scales and items were omitted.

Descriptive Scales

The American College Survey contains 45 scales which were scored to assess a student's interests, potential for various kinds of achievement, attitudes, and other orientations. The following sections summarize our knowledge of these assessment devices.

Vocational Preference Inventory (Fifth Revision). This personality and interest inventory is composed only of occupational titles (Holland, 1958). To take the inventory, a student indicates which occupations he likes and dislikes. For this study only scores on the following scales were obtained: Realistic, Intellectual, Social, Conventional, Enterprising, Artistic, Status, and Acquiescence. Reliabilities (Kuder-Richardson 20) range from .57 to .89 for 6289 male college freshmen and from .50 to .89 for 6143 females.

For the purposes of our descriptive study, it is useful to interpret the VPI only as an inventory of vocational interests. The VPI scales and their "interest" interpretations are as follows:

Scale	Preference for:
Realistic	technical and skilled trades
Intellectual	scientific occupations
Social	teaching and helping occupations
Conventional	clerical occupations
Enterprising	supervisory and sales occupations
Artistic	artistic, musical, and literary occupations
Status	prestigeful occupations such as Lawyer, Doctor, Business Executive
Acquiescence	number of preferred occupations

Potential Achievement Scales. In an earlier study of National Merit Finalists (Holland and Nichols, 1963), Potential Achievement Scales were constructed empirically by sex for the prediction of six kinds of extracurricular achievement: art, music, writing, science, dramatics, and leadership. The students falling in the upper and lower 27 per cent on checklists of accomplishments for these fields in high school were compared for their preferences for 273 daily activities, hobbies, reading habits, school subjects, and sports. The upper and lower 27 per cent were drawn from samples of 500 boys and 500 girls. Typical items included working on guns, building scientific equipment, playing chess, going to a public library, giving talks, collecting rocks, playing charades, and drawing cartoons. In the first study of these scales only the fifteen most discriminating items were used. Item-criterion correlations ranged from .24 to .80.

In the present study, all scales were lengthened by adding 3 to 14 items per scale. These additions were intended to increase the reliability and perhaps the validity of the Potential for Achievement Scales. The lengthened scale reliabilities (Kuder-Richardson) ranged from .77 to .87 for men and from .72 to .85 for women.

Extracurricular Achievement Record. The checklists of extracurricular accomplishment for the high school years were used earlier by Holland and Nichols (1964) and include the following areas: art, music, literature, dramatic art, leadership, and science. The score on each scale is simply the number of accomplishments checked. Students with high scores on one or more of these simple scales have attained a high level of accomplishment which is assumed to require one or more of the following characteristics: complex skills, long term persistence, and originality. The reliabilities (K-R 21) for individual records of accomplishment range from .48 to .75 for men and from .58 to .86 for women for National Merit Finalists. In a diverse group of college freshmen, the reliabilities (K-R 20) ranged from .72 to .84 for men and from .65 to .81 for women.

Preconscious Activity Scale. This scale is an a priori scale developed to measure Kubie's (1958) notion of preconscious activity as a process in creative performance (Nichols and Holland, 1963). The Preconscious Activity Scale is a 38-item true-false scale with reliabilities (K-R 20) of .72 and .68 for male and female college freshmen. The predictive validities of this scale and its concurrent relationships with originality and interest measures imply that the Preconscious Activity Scale should be interpreted as an originality measure, especially in the fields of art, literature, and music (Nichols and Holland, 1963).

Range of Competencies. Students checked those activities from a list of 143 which "You can do well or competently." The assumption underlying these scales is that a large number of competencies is conducive to achievement in the same field. Typical items from this list included: I have a working knowledge of Roberts' Rules of Order, I can read Greek, I can operate a tractor, I can use logarithm tables, etc. The number of activities checked equals a student's range of competencies or total number of competencies. In addition, competencies were categorized by three judges into the following areas of competency: scientific, technical, governmental, athletic, business, social and educational, and homemaking. Students were then scored for each kind of competency. The reliability (K-R 20) for the total number of competencies claimed was .94 and .93 for male and female college freshmen. On the scales for various kinds of competency, reliabilities ranged from .35 to .87 for men and from .11 to .85 for women. The very low reliabilities for some scales appear to result from the very small number of items in those scales.

Interpersonal Competency Scale. This twenty item, a priori scale was modeled after the work of Foote and Cottrell (1955), who defined interpersonal competence as "acquired ability for effective interaction," and who outlined a program of research to study this concept. Scale items simply poll the subject for those factors which Foote and Cottrell believe to be conducive to, or typical of interpersonal competency--good health, social experience and competencies, positive self-regard. The reliability (K-R 20) of the Interpersonal Competency Scale for groups of 6289 male and 6143 female college freshmen was .69 and .67 respectively.

Range of Experience. Students checked from a list of 76 items those places they had visited or those events they had experienced. The assumption underlying the development of this scale is that breadth of experience is conducive to achievement. Typical examples included:

museum, factory, gambling casino, summer camp, mental hospital, sports car race. This scale is scored by simply counting the number of experiences checked. The reliability (K-R 20) was .92 and .90 for male and female college freshmen.

Intellectual Resources in the Home. Students checked those things they have in their homes from a list of 39 items. The assumption underlying the construction of this scale is that many as opposed to few environmental resources are conducive to achievement. Typical items included: an encyclopedia set, tape recorder, sculpturing tools, sewing machine, power tools, library of more than 200 books. The number of items checked became a student's score for this variable. The reliability (K-R 20) of this scale was .81 for male college freshmen and .78 for female college freshmen.

Dogmatism Scale. This scale, developed by Rokeach to measure dogmatic and rigid thinking, consists of 40 true-false items dealing with beliefs and attitudes. (The first version by Rokeach is in multiple choice form.) The reliability (K-R 20) for 6289 male college freshmen was .77 and for 6143 female college freshmen was .75.

Student Orientation Survey, Form C. Farber and Goodstein (1964) developed four a priori scales to assess the student orientations implied in Trow's student typology (1960). These scales are Academic, Collegiate, Non-Conforming, and Vocational. The Collegiate Orientation is epitomized by its emphasis on social and extracurricular life. The Vocational Orientation is characterized by its focus on preparation for the world of work. The essence of the Academic Orientation is "its identification with the intellectual concerns of the faculty." The distinctive quality of the Non-Conformist Orientation is a deep involvement with the adult world of art, literature, and politics rather than with the world of the campus; and a critical view of conventional student attitudes and behavior.

The a priori scales were revised by an internal consistency item analysis. In the present sample, reliability (K-R 20) for these ten-item scales ranged only from .39 to .45 for male college freshmen and from .36 to .50 for females.

Other Descriptive Information

Students were polled for their educational and economic aspirations, their life goals, and their self-ratings. They were also asked to indicate their choice of vocation and field of training, and to provide background information. Their high school grades and ACT scores were available from college records.

Life Goals. Students indicated the degree to which 35 different life goals and achievements were "essential, very important, somewhat important, or of little importance" (for example, being a religious person, making a contribution to scientific knowledge, being happy and content).

Self-Ratings. Students rated their personal traits and abilities on a four-point scale--top 10%, above average, average, and below average--using a list of 31 traits and abilities, such as originality, scholarship, and conservatism.

Table 2 summarizes the reliability coefficients (K-R) for all descriptive scales and the number of items in each scale. Generally, the scales possess moderate to high internal consistency. Scales with low coefficients are usually brief scales or ones with marked heterogeneity of content.

Table 2

Kuder-Richardson Reliabilities for the Descriptive Scales of the American College Survey

Scale	No. of Items		Reliability	
	Men	Women	Men	Women
1. Realistic	14	14	.85	.77
2. Intellectual	14	14	.89	.89
3. Social	14	14	.84	.82
4. Conventional	14	14	.87	.83
5. Enterprising	14	14	.83	.76
6. Artistic	14	14	.88	.88
7. Status	14	14	.71	.60
8. Acquiescence	30	30	.76	.76
9. Leadership Potential	29	20	.86	.77
10. Literary Potential	18	20	.84	.72
11. Artistic Potential	20	24	.79	.85
12. Scientific Potential	23	24	.81	.80
13. Musical Potential	18	21	.87	.74
14. Dramatic Arts Potential	18	23	.77	.82
15. Range of Experience	76	76	.92	.90
16. Intellectual Home Resources	39	39	.81	.78
17. Scientific Achievement	15	15	.80	.81
18. Leadership Achievement	14	14	.72	.65
19. Dramatic Arts Achievement	13	13	.75	.72
20. Artistic Achievement	12	12	.84	.81

Table 2 (cont.)

Scale	No. of Items		Reliability	
	Men	Women	Men	Women
21. Literary Achievement	8	8	.73	.70
22. Musical Achievement	15	15	.84	.77
23. Total Competencies	143	143	.94	.93
24. Scientific Competency	11	11	.70	.67
25. Technical Competency	23	23	.83	.76
26. Government and Social Studies Competency	2	2	.57	.54
27. Athletic Competency	11	11	.71	.70
28. Business and Clerical Competency	5	5	.48	.38
29. Social and Educational Competency	13	13	.78	.74
30. Homemaking Competency	24	24	.86	.85
31. Arts Competency	34	34	.87	.85
32. Leadership and Sales Competency	12	12	.80	.79
33. Foreign Language Competency	6	6	.35	.11
34. Preconscious Activity (Originality)	38	38	.72	.68
35. Dogmatism	40	40	.77	.75
36. Academic Type	10	10	.45	.42
37. Vocational Type	10	10	.39	.36
38. Non-Conformist Type	10	10	.42	.43
39. Collegiate Type	10	10	.45	.50
40. Interpersonal Competency	20	20	.69	.67

Note.--All tables except for tables 14-17 are based on the total student samples of 6,289 men and 6,143 women. In Table 2, the reliabilities for variables 9-14 were calculated using Kuder-Richardson formula 21; all other reliabilities were calculated using K-R 20.

IV. The Typical College Student

In this section, we have characterized the average or typical college freshman by summarizing his aspirations and goals, his background, his opinions and attitudes, his potentials, his competencies, and his outlook. Since the findings are voluminous, only the main findings are discussed in the text. A careful review of the specific findings in each table will yield a more complete account of the typical freshman.

Aspirations and Goals

The distributions of student choices of major field and vocation are shown in Table 3. These distributions are expected ones and are similar

Table 3

Student Choices of Career and Major Field

Field	Men		Women	
	Career	Field	Career	Field
Agricultural, related	8	6	0	0
Biological Sciences	3	4	1	2
Business and Administration	15	13	8	7
Education, elem. and sec.	16	17	51	49
Engineering	14	15	0	0
Health Professions	11	9	11	9
Humanities	4	6	4	8
Military	1	0	0	0
Physical Sciences	3	5	1	2
Psychology	2	1	2	3
Social Sciences	2	7	4	5
Other, or Don't Know	19	15	17	14

Note.--All figures are percentages.

to those obtained by Flanagan and others (1964). The freshmen men show more diversity in their choices than women with the largest numbers of men selecting engineering, education, and business fields. A large percentage of women prefer various kinds of educational fields. About half of the freshmen are "well satisfied" with their current selection of vocation (see Table 4).

Table 4

Satisfaction of College Freshmen

with their Current Career Choice

Degree of Satisfaction	Men	Women
Well satisfied	47	54
Moderately satisfied, some reservations	33	31
Dissatisfied, intend to remain	2	2
Dissatisfied, intend to change	4	3
Undecided about future career	12	8

Note.--All figures are percentages.

Generally, freshmen have high aspirations for their future vocational achievement. More than 95 and 92 per cent of the men and women, respectively, hope their future vocational achievement will be above average.

Likewise, their economic aspirations are high, although there is a marked sex difference: 69 per cent of the men expect to earn more than

Table 5

Vocational Aspirations of College Freshmen

Compared with the achievement of other people in my chosen vocation, I hope my achievement will be:	Men %	Women %
Average	5	8
Above Average	26	38
Top 25%	28	26
Top 10%	19	16
Top 5%	8	5
Top 1%	13	6

10, 000 dollars ten years after graduation from college, but only 28 per cent of the women expect to earn such incomes. See Table 6. Using a similar item, Flanagan (1964) obtained comparable figures for students attending college.

Table 6

Economic Aspirations of College Freshmen

Ten years after my graduation from college I expect to have an income of:	Men %	Women %
$5, 000	2	11
$5, 001 - 10, 000	29	59
$10, 001 - 15, 000	39	19
$15, 001 - 20, 000	17	6
$20, 000 +	3	3

Table 7 shows that 61 per cent of the men and 45 per cent of the women aspire to post graduate degrees (M.A., Ph.D., M.D., etc.).

Table 7

Educational Aspirations of College Freshmen

"Check the highest level of education you expect to complete."	Men %	Women %
Bachelor of Arts or Science	27	44
Master of Arts or Science	37	39
Doctor of Dental Surgery	2	0
Doctor of Medicine	7	1
Doctor of Philosophy	10	4
Doctor of Laws	5	1
Other	11	9

Our estimates of student educational aspirations are consistent with recent estimates of degree sought by other investigators (Astin, 1961; Davis, 1963). Again, women have lower educational aspirations than men.

To epitomize the average student's life goals, we selected the seven life goals--taken from a list of 35--which are most popular for men and women. These aims are presented in Table 8.

When we look in Table 8, the most common aspirations imply the typical freshman is concerned with his interpersonal relations (being a

Table 8

The Most Popular Life Goals and Aspirations of College Freshmen

Life Goals	Men %	Women %
Being a good husband or wife	79	93
Becoming happy and content	74	84
Becoming a mature and well-adjusted person	69	86
Having the time and means to relax and enjoy life	43	51
Being a good parent	83	94
Finding a real purpose in life	75	87
Developing a meaningful philosophy of life	37	52

Note.--% equals the percentage of students who believed that a goal was "Essential to you, something you must achieve."

good husband or wife, parent; being mature and well-adjusted), his personal comfort, and his acquisition of a meaningful orientation to the world. These results should be interpreted in light of all goals presented to the student. Among the least popular aspirations were the following: being well-off financially, becoming accomplished in the performing arts, becoming a community leader, becoming influential in public affairs, avoiding hard work, having executive responsibility for the work of others, and similar goals. The differential importance attributed to the 35 possible goals is generally congruent with the values of "self interest and privatism" attributed to the typical college student in 1957 by Jacobs.

Background

The gross family income for the freshman sample approximates that obtained earlier by Flanagan (1964) for a sample of college freshmen. For our sample the median family income for men is about $8,400 per year and about $8,700 per year for women. A comparison of Table 9 with Table 6 (Economic Aspirations of College Freshmen) reveals a marked difference between men and women. While only 28 per cent of the men have family incomes of more than $10,000, 69 per cent indicate they expect to earn this much per year. For women, 24 per cent indicate family income of more than $10,000 and 28 per cent expect to attain this level themselves.

Table 9

Annual Family Income of College Freshmen

Family Income	Men %	Women %
Less than $5, 000	12	9
$5, 000 to 7, 499	20	16
$7, 500 to 9, 999	16	12
$10, 000 to 14, 999	16	15
$15, 000 to 19, 999	6	5
$20, 000 to 24, 999	2	2
$25, 000 and over	4	2
Consider this information confidential	9	10
Don't know	13	26

The current marital and dating status for the freshman sample is given in Table 10.

Table 10

Current Marital or Dating Status of College Freshmen

Status	Men %	Women %
Married (children or expecting)	3	2
Married (no children)	2	2
Engaged	5	6
Pinned, going steady	19	21
Usually date same person	20	20
Usually date different persons	41	41
Do not date at all	9	7

Table 10 indicates that about 50 per cent of the freshmen are committed to a relationship with only one member of the opposite sex (married, engaged or going steady). Only 41 per cent of the freshmen date different persons, and about 8 per cent do not date at all. The degree of pairing off shown in Table 10 seems greater than in early studies, although comparisons are difficult to assess. Such a trend toward early psycho-sexual involvement may mean that the acquisition of the usual educational goals of intellectualism, breadth of interest and experience and competency will be lessened because of a student's intense relationship with another person. It is also possible that when this relationship becomes more formal and permanent (engagement or marriage), the student is free to return to intense educational concerns.

About 43 per cent of the freshmen believed that their college was "the best possible college for me that I know of." Only about 13 per cent believed that their college "is only a fair college, and there are many others which would probably suit me better." The latter finding is remarkable when we visualize the great range of faculty talent and related resources among colleges. Our results suggest that students find colleges which are congruent with their needs, although other interpretations are also plausible. For example, students may only be rationalizing their somewhat irreversible choice of a college, or they may not have sufficient information to know whether or not they would be happier elsewhere. Table 11 summarizes student reports of the degree of satisfaction with their college.

Table 11

Student Satisfaction with College

Response	Men %	Women %
This is the best possible college for me that I know of	40	47
This is a good college for me, but there are a few others that I think are better	45	39
This is only a fair college, and there are many others which would probably suit me better	14	13

Attitudes and Opinions

Since many of the scales in the American College Survey contained individual statements of general interest, twenty-five such statements and the percentage of students endorsing each were selected from the survey and are presented in Table 12. A cursory review of these student opinions and attitudes implies that students believe faculty are important, unappreciated, impractical, too inaccessible; that institutional administrations are not too restrictive; that colleges need more school spirit; and that the most important goal of a college education is preparation for a career.

Students appear to conceive of themselves as practical and realistic persons who prefer carefully organized assignments instead of independent reports and papers. Less than one-quarter of the students work 15 hours or more a week or study several hours a day in the library. Their opinions about some political matters mirror earlier findings by Remmers (1957) which show that about half of our college students reject one or more of our civil liberties. For example, more than half of the students believe "it is. . . necessary to restrict the freedom of certain political groups." Less than half of the students think that "the classroom or lab is the place one is most likely to encounter important ideas." Such student beliefs along with others in Table 12 are congruent with much current opinion and recent research about college students.

Generally, the results shown in Table 12 are similar for men and women. The striking exception to this rule is that 43 per cent of the men say, "I practically never attend religious services while at college," but only 24 per cent of the women endorse this statement.

Table 12

Student Attitudes and Opinions about

Faculty, Academic Life, and Educational Goals

	Item	Men %	Women %
1.	The best thing about this school is the quality of the faculty.	43	37
2.	The contributions of university professors are generally not adequately appreciated.	64	67
3.	Instructors would generally teach more useful courses if they themselves had more practical experience.	67	62
4.	A major drawback of this institution is that the faculty have too little time to discuss their ideas with undergraduate students.	54	57
5.	There is at least one faculty member with whom I like to discuss my ideas.	56	58
6.	Many of the required courses here at college should not be compulsory because they emphasize only theories rather than practical knowledge.	39	38
7.	The administration of this school is far more restrictive than it should be.	29	25
8.	This would be a better school if more students had more school spirit.	64	73
9.	I practically never attend religious services while at college.	43	24
10.	The thing I'll remember most about going to college is the fun and good times.	31	33
11.	The most important thing about college is preparing for a career.	75	64
12.	I am more of a realist than an idealist.	69	64
13.	I usually go to hear visiting lecturers I think will be intellectually stimulating.	39	44

Table 12 (cont.)

Item	Men %	Women %
14. I have a part-time job at which I work 15 or more hours a week.	22	14
15. The United States and Russia have just about nothing in common.	15	13
16. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.	57	54
17. Students ought to be rather careful about what they say and do because it might jeopardize their careers.	51	49
18. I choose electives mainly for their cultural and intellectual value.	54	64
19. I typically spend several hours a day studying in the library.	21	25
20. The most important thing about grades is to keep a decent average.	61	56
21. A student's grades are very important to prospective employers.	80	81
22. The classroom or lab is the place one is most likely to encounter important ideas.	39	37
23. I often try to be alone so I can think things through.	73	77
24. I prefer teachers who give well-organized courses and clear assignments to those who require independent reports and papers.	78	79
25. I prefer to study alone.	77	76

Note. --% equals percentage of students who said "true" as opposed to "false" to a given statement.

Interests, Potentials, and Outlook

The 45 variables used to assess a student's interests, potentials, experience, achievements, competencies, originality, and orientations are listed in Table 13 along with their means and standard deviations. Since most of these simple scales for the estimation of student traits and potentials have not been used with large normal student or adult populations, their descriptive relevance is limited. The differences between freshmen men and women are, however, easily interpreted.

Women, for example, are characterized by their social interests, musical and dramatic arts potential, and homemaking competencies. In contrast, men are characterized by their interests in scientific and technical occupations, leadership and scientific potentials, scientific achievement, technical and athletic competencies. The variables in Table 13 are more useful for the description of the variation among colleges in the next section.

Table 13

The Means and Standard Deviations of

Descriptive Scales for the Sample of College Freshmen

Scales	Men		Women	
	Mean	S.D.	Mean	S.D.
1. Realistic	4.33	3.59	1.49	2.11
2. Intellectual	5.42	4.32	3.81	3.93
3. Social	4.45	3.63	8.12	3.71
4. Conventional	3.23	3.53	2.71	3.03
5. Enterprising	4.57	3.54	3.83	2.93
6. Artistic	3.62	3.71	5.89	4.31
7. Status	8.03	2.94	9.28	2.14
8. Acquiescence	11.64	4.80	11.67	4.80
9. Leadership Potential	24.76	8.78	19.40	5.66
10. Literary Potential	15.57	6.31	14.65	5.53
11. Artistic Potential	10.91	5.74	10.91	6.56
12. Scientific Potential	17.60	6.96	13.56	6.33
13. Musical Potential	8.43	6.34	17.86	5.71

Table 13 (cont.)

Scales	Men		Women	
	Mean	S.D.	Mean	S.D.
14. Dramatic Arts Potential	12.31	5.15	18.16	6.59
15. Range of Experience	9.26	8.49	8.69	7.52
16. Intellectual Home Resources	19.06	5.68	19.14	5.13
17. Scientific Achievement	1.40	2.19	0.81	1.73
18. Leadership Achievement	4.26	2.74	4.58	2.34
19. Dramatic Arts Achievement	1.75	2.10	2.19	2.18
20. Artistic Achievement	0.86	1.82	1.08	1.88
21. Literary Achievement	0.82	1.38	1.25	1.55
22. Musical Achievement	1.52	2.35	1.71	2.03
23. Total Competencies	53.12	19.95	58.11	17.60
24. Scientific Competency	4.10	2.51	3.02	2.26
25. Technical Competency	12.50	4.51	5.02	3.24
26. Government & Social Studies Competency	0.74	0.80	0.63	0.77
27. Athletic Competency	6.09	2.32	4.13	2.36
28. Business & Clerical Comp.	1.96	1.37	2.06	1.26
29. Social & Educational Comp.	5.75	2.99	7.70	2.57
30. Homemaking Competency	8.08	4.84	17.52	4.54
31. Arts Competency	7.49	5.91	11.00	6.05
32. Leadership & Sales Comp.	4.45	3.10	4.97	3.12
33. Foreign Language Competency	0.83	0.99	1.24	0.99
34. Preconscious Activity (Originality)	16.85	5.33	19.12	4.93
35. Dogmatism	17.57	5.88	16.92	5.54
36. Academic Type	4.54	1.99	4.68	1.95
37. Vocational Type	4.98	1.77	4.42	1.70
38. Non-Conformist Type	3.26	1.73	2.84	1.64
39. Collegiate Type	4.49	1.90	5.00	2.02
40. Interpersonal Competency	11.16	3.42	11.56	3.28
41. ACT English	19.44	4.47	21.77	4.06
42. ACT Mathematics	22.54	5.84	19.42	5.72
43. ACT Social Studies	21.33	5.49	21.34	5.22
44. ACT Natural Science	22.57	5.46	20.71	5.37
45. High School Average	2.73	0.74	2.98	0.68

Table 13 (cont.)

Note.--Means and standard deviations for scales 41-45 are based on samples of 3771 men and 3492 women. The remaining figures are based on the total samples of 6289 men and 6143 women.

V. The Variation Among Colleges

This section summarizes how college freshmen differ from one another--the range of student differences in the samples of 12,432--and how freshman classes differ from one another--the range of differences across colleges. Although the occurrence of such differences for a variety of student characteristics is intrinsically interesting, differences among students and colleges are most important because of their implications for admissions practice, choice of a college, institutional planning, and evaluation of institutional impact. Without such descriptive information, constructive educational planning and change are seriously impaired.

Tables 14-19 and Figures 1-12 illustrate and summarize the freshman class differences across colleges. In Tables 14 through 17 we have compared a junior college, a state university, and a four year college on a great range of student characteristics. The purpose of these comparisons is simply to illustrate the substantial differences among college classes. The colleges used for these comparisons do not always yield the most extreme comparisons possible.

Table 14, for instance, shows the percentage of students at each of the three diverse institutions who endorse various statements of opinion about faculty, academic life, and educational goals. A review of Table 14 reveals some striking differences. For example, the statement "The most important thing about college is preparing for a career" is endorsed by only 10 per cent of the women at a four year college and by 71 per cent of the women at a junior college. The statement, "The thing I'll remember most about going to college is the fun and good times" is endorsed by 63 per cent of the junior college women but by only 8 per cent of the four year college women. Such differences and other differences in Table 14 emphasize the substantial divergency of goals and attitudes among freshmen.

Table 14

Examples of Variation in Student Attitudes about Faculty, Academic Life, and Educational Goals

Item	A Junior College %Saying Yes		A State University %Saying Yes		A Four Year College %Saying Yes	
	Men	Women	Men	Women	Men	Women
The best thing about this school is the quality of the faculty.	46	56	33	25	41	44
Instructors would generally teach more useful courses if they themselves had more practical experience.	55	46	71	59	45	40
I believe interracial dating is likely to lead to trouble.	62	73	75	79	30	16
This would be a better school if more students had more school spirit.	67	70	59	58	28	20
I practically never attend religious services while at college.	34	11	38	25	71	54

Table 14 (cont.)

Item	A Junior College % Saying Yes		A State University % Saying Yes		A Four Year College % Saying Yes	
	Men	Women	Men	Women	Men	Women
The thing I'll remember most about going to college is the fun and good times.	37	63	32	36	13	8
The most important thing about college is preparing for a career.	77	71	79	58	20	10
Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.	62	59	57	53	29	20
I choose electives mainly for their cultural and intellectual value.	43	60	54	62	77	90
I prefer teachers who give well-organized courses and clear assignments to those who require independent reports and papers.	82	89	85	82	38	42
I attend most of the home athletic events.	72	81	75	78	32	4

Similar differences among these same illustrative colleges are shown in Table 15 for the life goals and aspirations of their students. For instance, "following a formal religious code" is an "essential" goal for only 7 per cent of the men at a four year college, but 43 per cent of the junior college men find this goal "essential." Many other aspirations show equal or greater variations among colleges: "being well read, writing good fiction, and being well liked."

Table 15

The Percentage of Students Who Say Each of the Following Life Goals is "Essential. . . something you must achieve"

Goal	A Junior College		A State University		A Four Year College	
	Men	Women	Men	Women	Men	Women
Becoming happy and content	73	87	76	86	55	48
Developing a meaningful philosophy of life	28	56	31	56	49	68
Doing something which will make my parents proud of me	51	56	35	50	13	12
Following a formal religious code	43	65	30	37	7	6
Keeping in good physical condition	45	41	37	50	23	30
Being well liked	37	59	31	46	6	12
Engaging in exciting and stimulating activities	21	24	19	23	42	48
Being successful in a business of my own	32	14	31	16	6	0
Writing good fiction	1	6	3	5	12	8
Being well read	13	32	13	26	26	52

Tables 16 and 17 reiterate the differences among colleges with respect to students' educational and economic aspirations. Generally these results (Tables 16 and 17) conform with our general knowledge of students at different types of institutions.

Table 16

An Example of the Variation in Economic Aspirations of College Freshmen

Ten years after graduation from college I expect to have an income of:	A Junior College		A State University		A Four Year College	
	Men %	Women %	Men %	Women %	Men %	Women %
$5, 000 or less	2	25	1	16	1	6
$5, 001 - 10, 000	40	56	27	52	35	54
$10, 001 - 15, 000	37	16	41	23	32	22
$15, 001 - 20, 000	11	0	18	6	14	8
$20, 001 +	9	2	12	2	13	2
No Response	1	1	1	1	5	8

Table 17

An Example of the Variation in Educational Aspirations of College Freshmen

"Check the highest level of education you expect to complete"	A Junior College		A State University		A Four Year College	
	Men %	Women %	Men %	Women %	Men %	Women %
Bachelor of Arts or Science	32	37	38	59	7	18
Master of Arts or Science	38	22	32	31	16	48
Doctor of Dental Surgery	2	0	1	0	0	0
Doctor of Medicine	5	2	6	1	9	0
Doctor of Philosophy	6	5	7	2	57	32
Doctor of Laws	0	0	2	0	6	0
Other	17	32	13	7	3	0
No Response	0	2	1	0	2	2

To compare a state university, a four year college, and a junior college on 44 of the 45 measured variables in the American College Survey, a set of four figures was prepared for each institution. The 44 means or averages for each institution were profiled by using the national norms developed for the total samples of men and women. For example, a college's average score for a given variable has been interpreted as a percentile rank based on national norms. By comparing the three illustrative institutions on the same student characteristics we can again gain more information about the ways in which freshman classes vary. The comparisons across the tables for the three colleges make clear the extensive variation among colleges. Generally, Figures 1-12 demonstrate that college freshman classes have marked variations in vocational interests, potentials for academic and extra-curricular achievement, competencies and orientations to college life.

Figure 1

Percentile Ranks of Average Scores on the Interest Scales

of the American College Survey--A Junior College

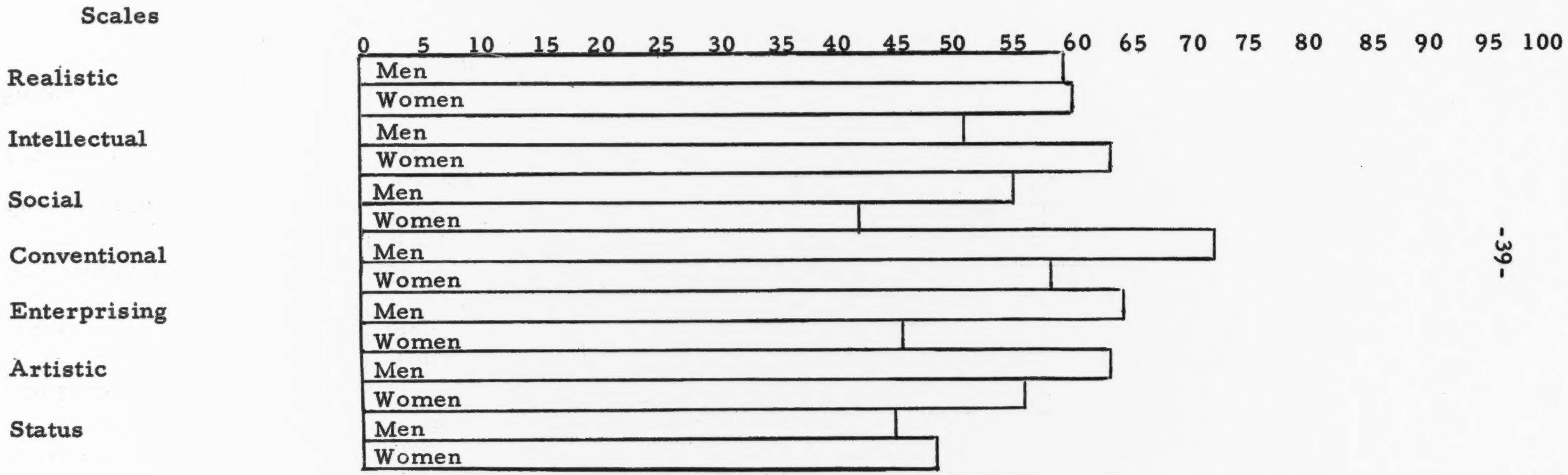


Figure 2

Percentile Ranks of Average Scores on the Interest Scales of the American College Survey--A State University

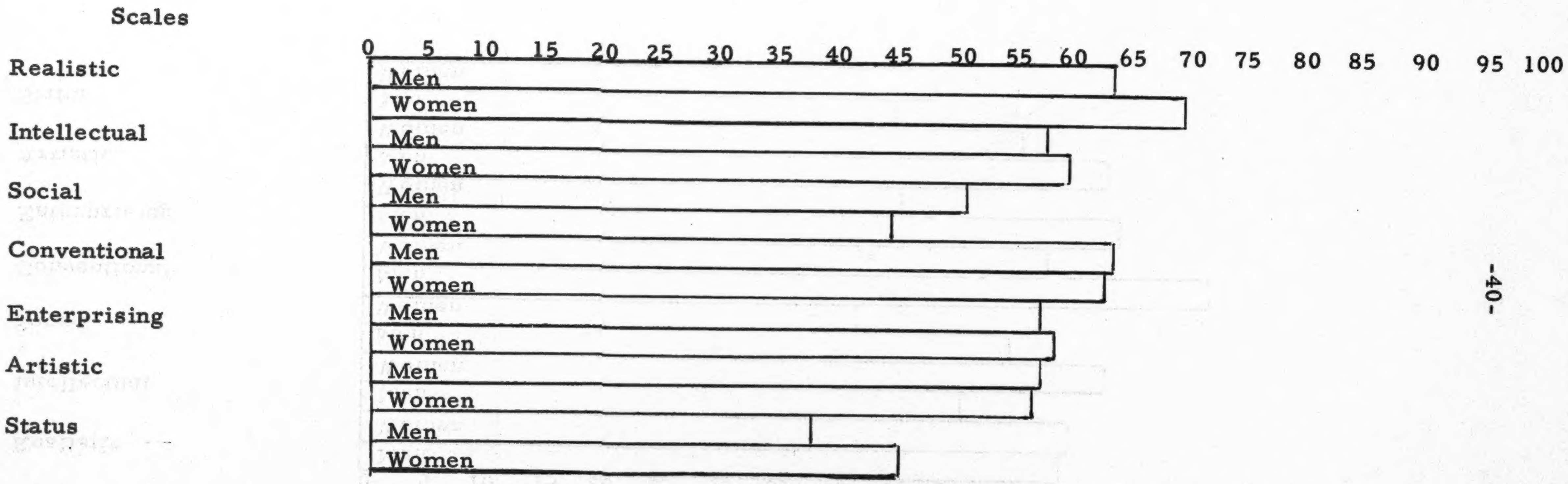


Figure 3

Percentile Ranks of Average Scores on the Interest Scales

of the American College Survey--A Four Year College

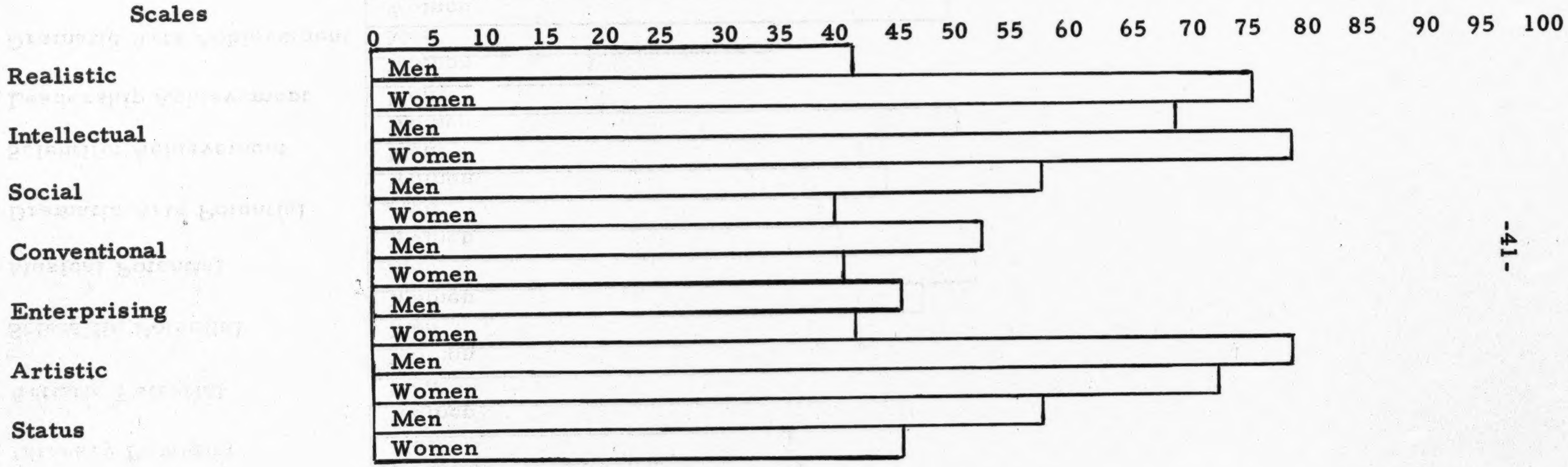


Figure 4

Percentile Ranks of Average Scores on Achievement and Originality Scales

of the American College Survey--A Junior College

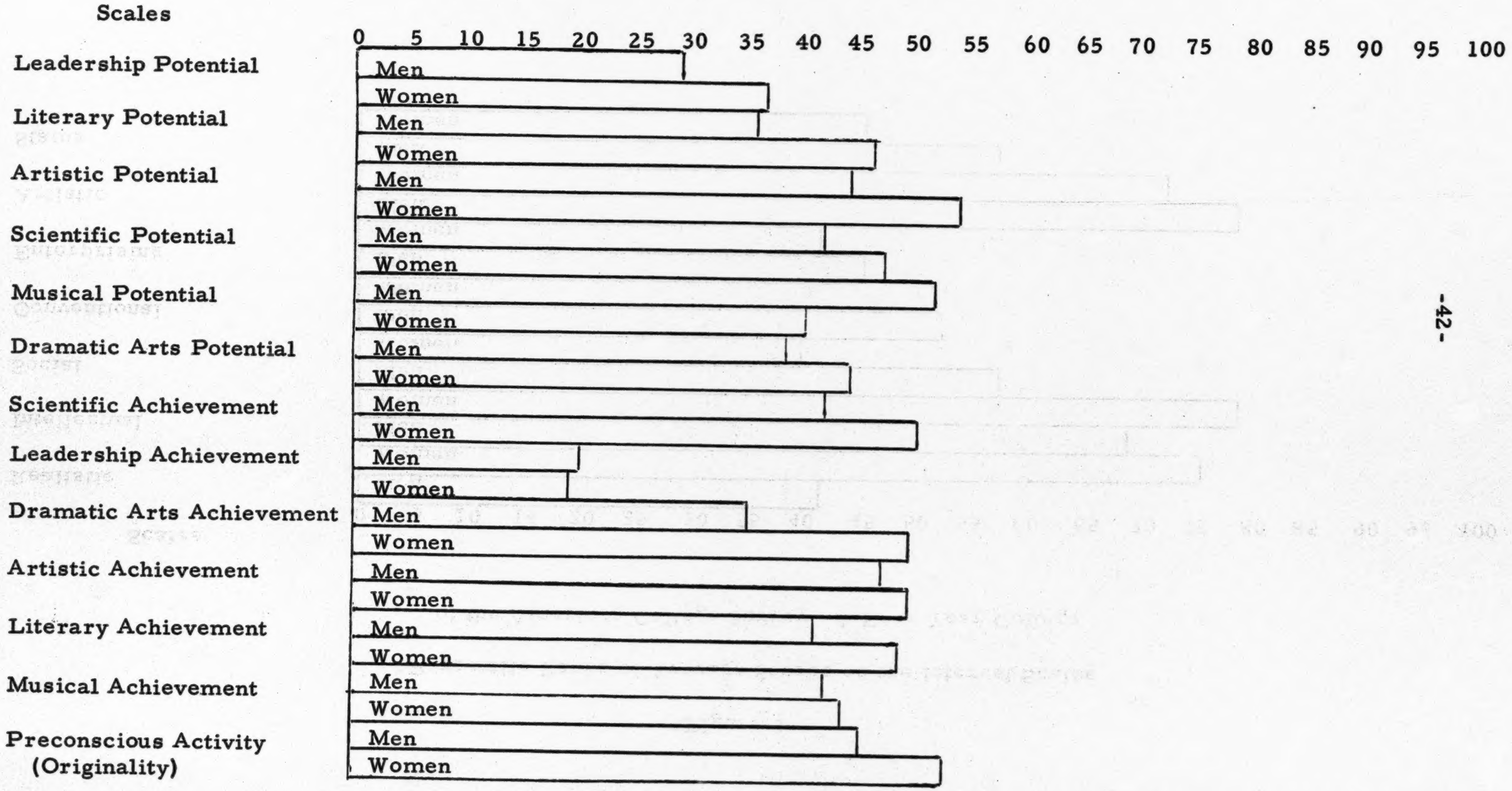


Figure 5

Percentile Ranks of Average Scores on Achievement and Originality Scales of the American College Survey--A State University

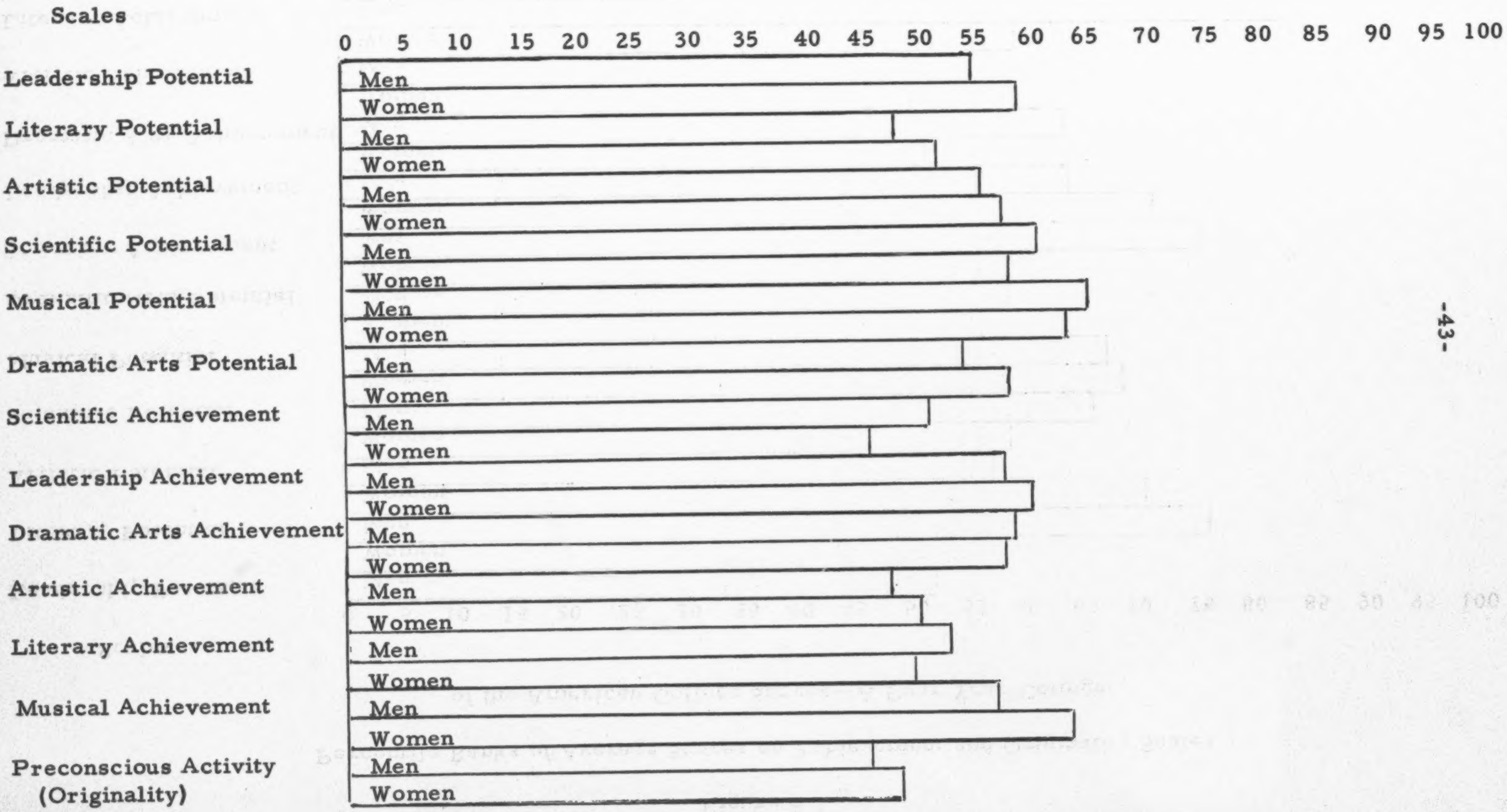


Figure 6

Percentile Ranks of Average Scores on Achievement and Originality Scales of the American College Survey--A Four Year College

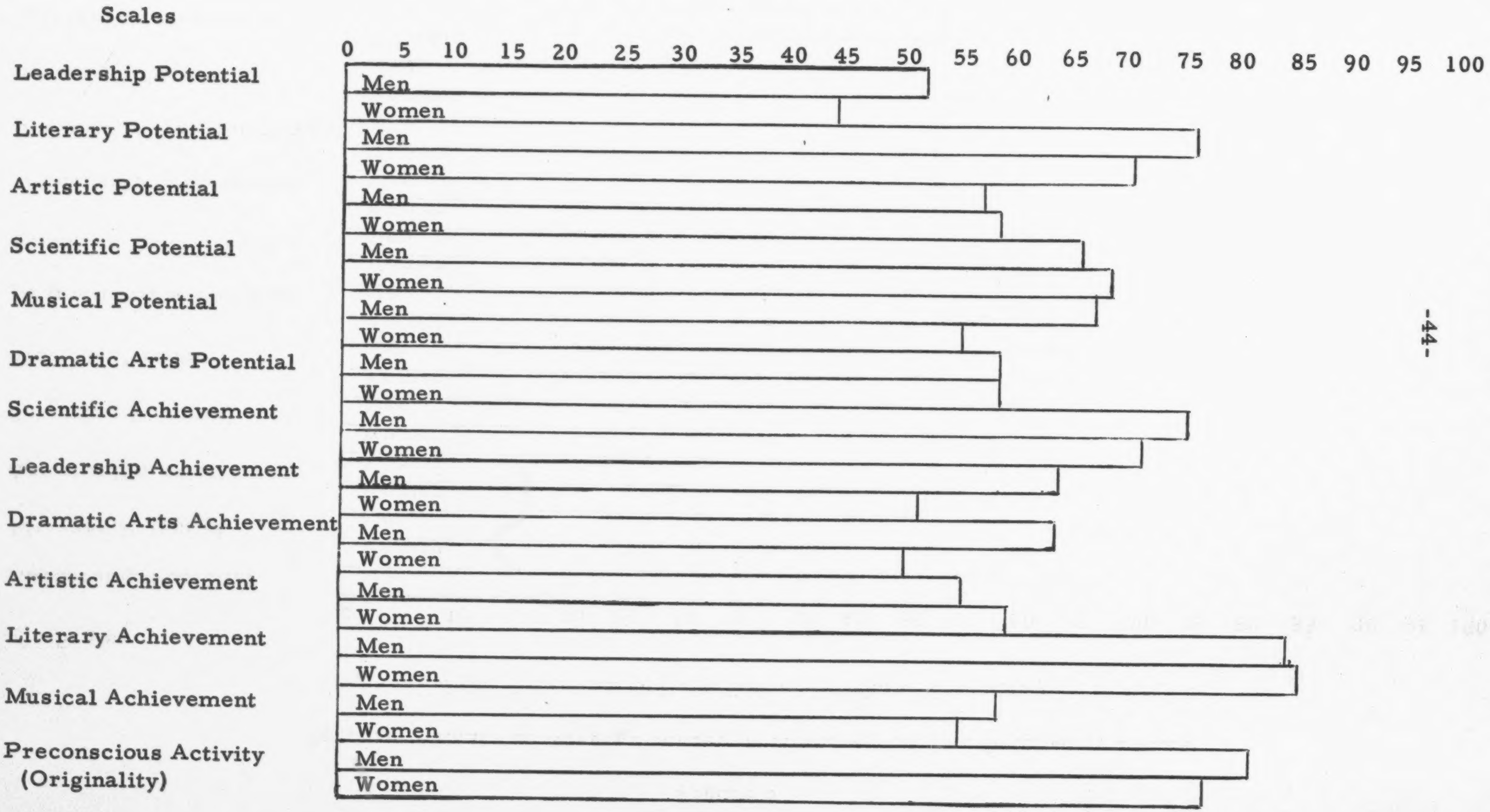


Figure 7

Percentile Ranks of Average Scores on Competency Scales

of the American College Survey--A Junior College

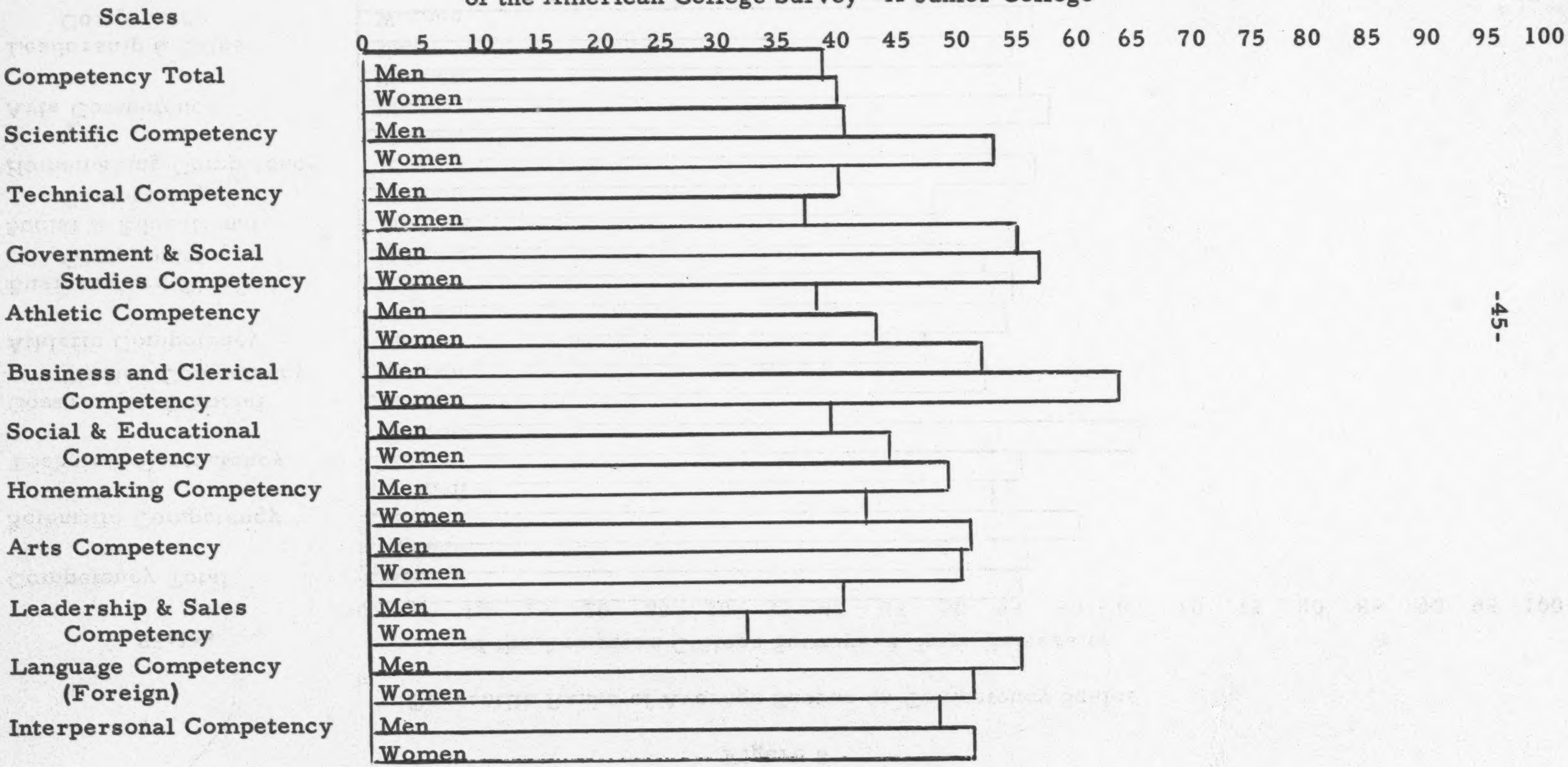


Figure 8

Percentile Ranks of Average Scores on Competency Scales

of the American College Survey--A State University

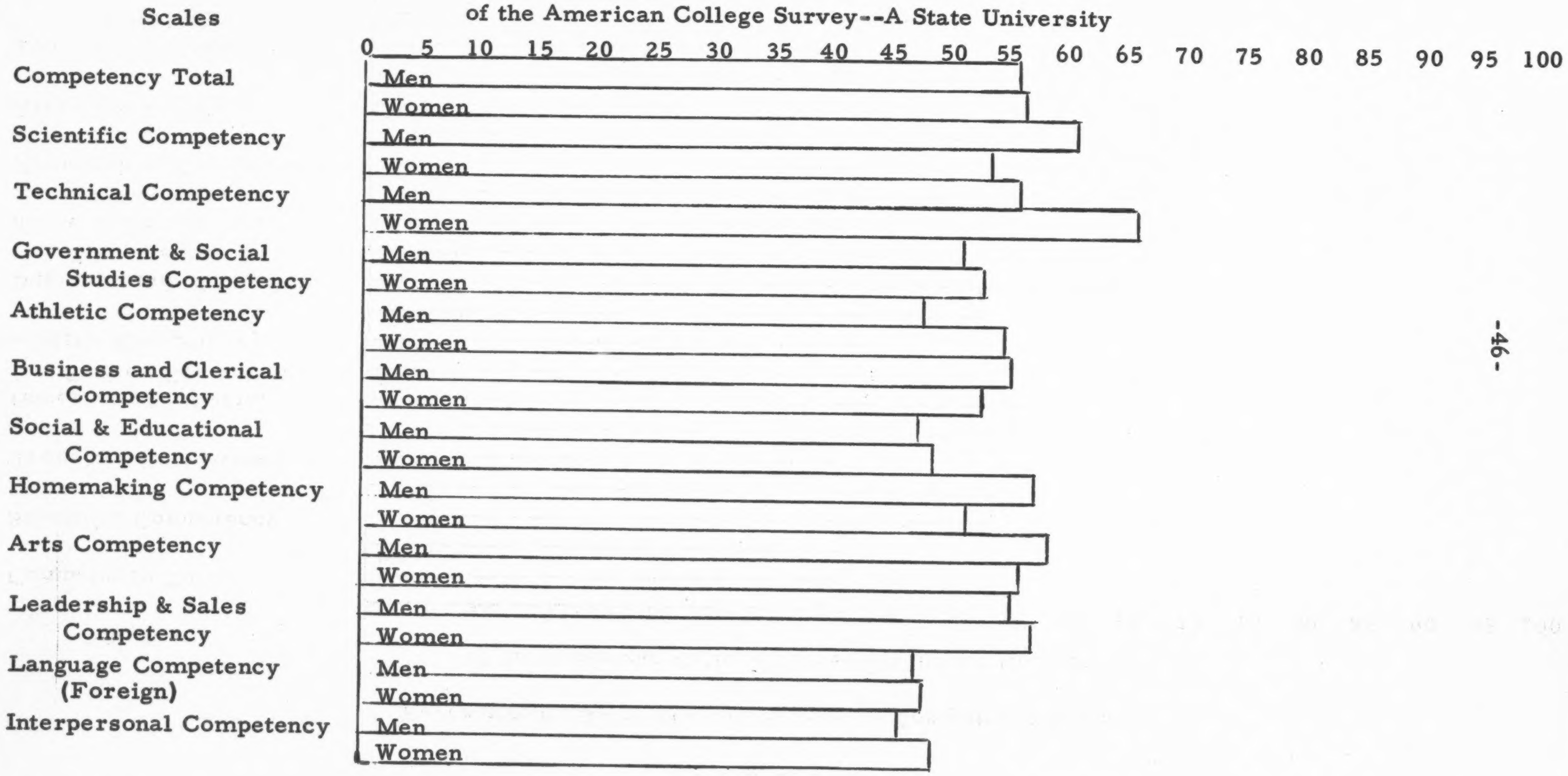


Figure 9

Percentile Ranks of Average Scores on Competency Scales

of the American College Survey--A Four Year College

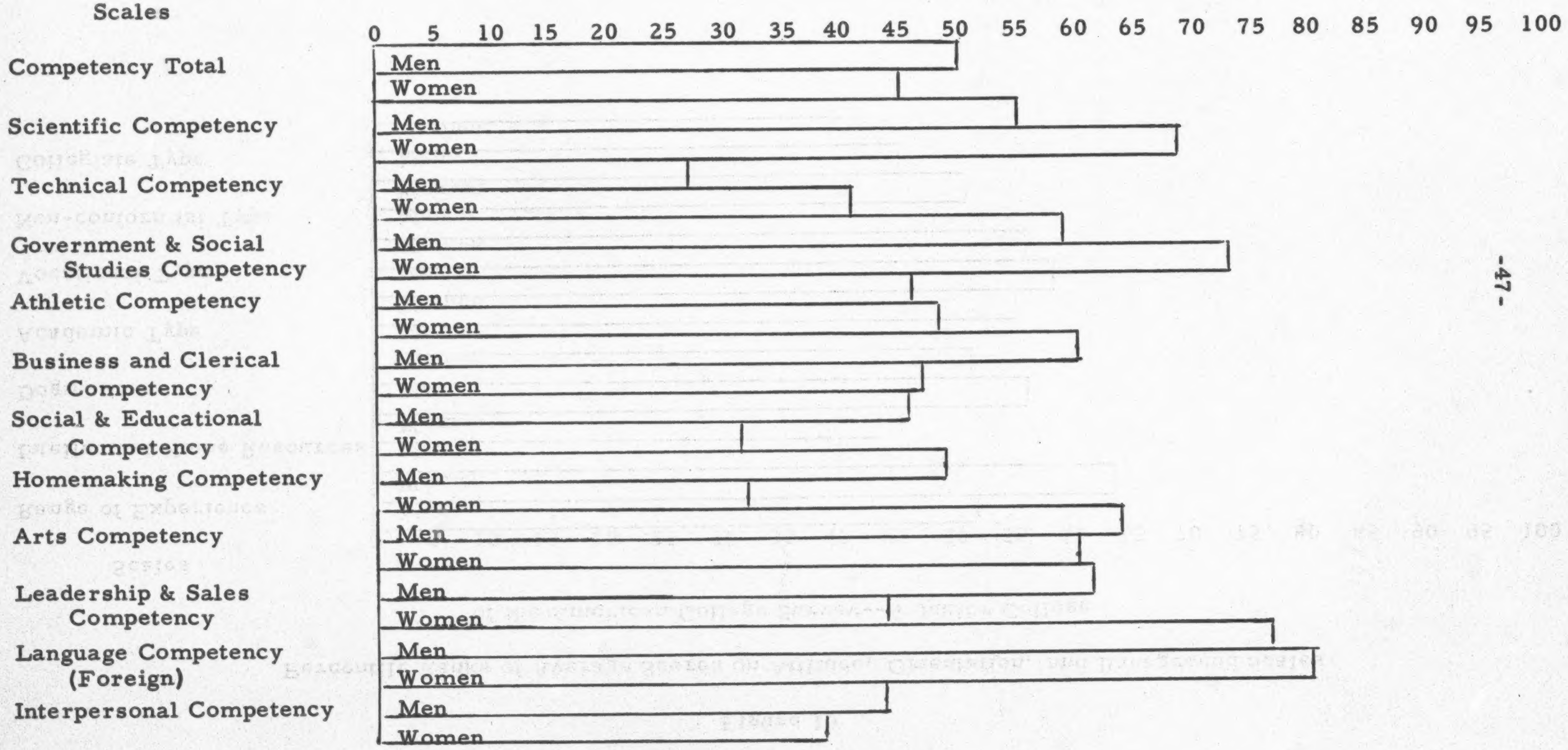


Figure 10

Percentile Ranks of Average Scores on Attitude, Orientation, and Background Scales of the American College Survey--A Junior College

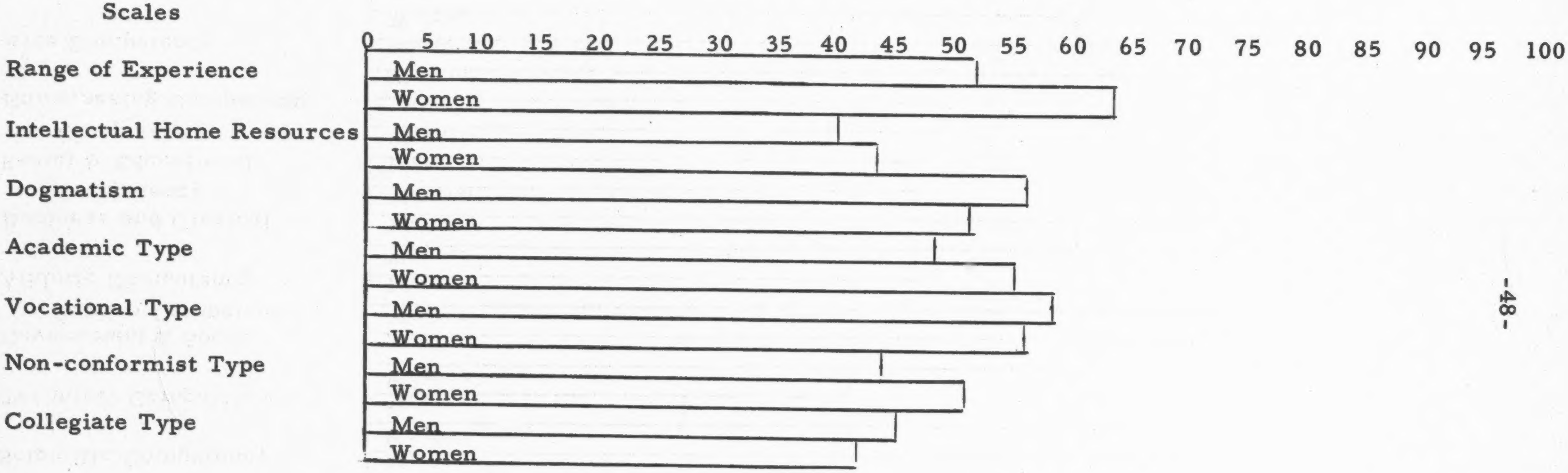


Figure 11

Percentile Ranks of Average Scores on Attitude, Orientation, and Background Scales of the American College Survey--A State University

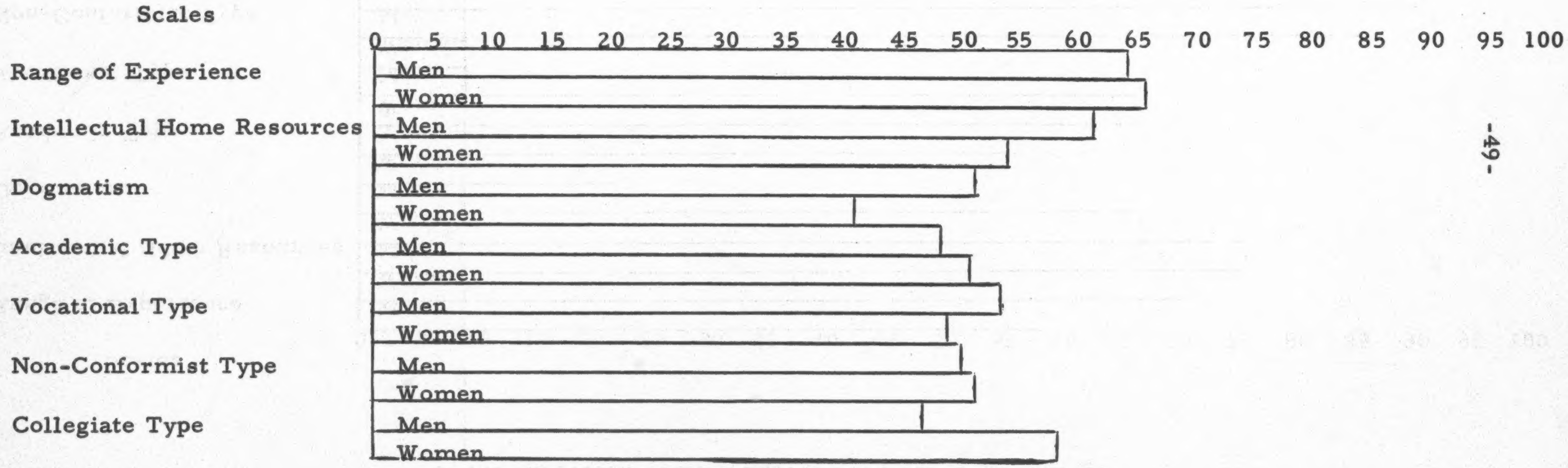
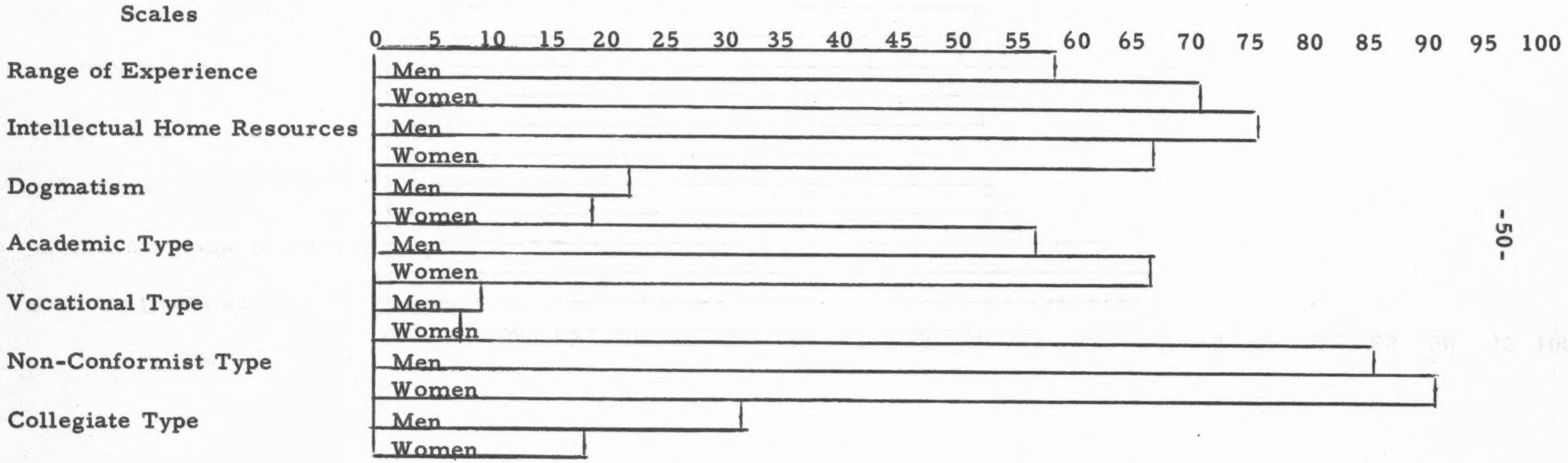


Figure 12

Percentile Ranks of Average Scores on Attitude, Orientation, and Background Scales of the American College Survey--A Four Year College



Since a large number of personal traits and similar variables were used to examine institutional differences, it appeared useful to determine also the student characteristics which show the greatest variation among colleges. To accomplish this task, the range of means across colleges was obtained (the difference between the highest and lowest average college score for a given student trait) and divided by the standard deviation for all students in the national sample. This calculation provides a simple measure of the relative variation in college means for each variable. Tables 18 and 19 present the results of these analyses for men and women.

Table 18

Descriptive Scales of the American College Survey in order of Variability among Colleges for Female Samples

Descriptive Scales	Range of Means / Standard Deviation
1. ACT Composite (both sexes)	2.34
2. Non-Conformist Type	2.33
3. Leadership Potential	1.95
4. Vocational Type	1.88
5. Foreign Language Competency	1.80
6. Collegiate Type	1.68
7. Dogmatism	1.54
8. Home Resources	1.40
9. Intellectual (VPI)	1.32
10. Literary Achievement	1.26
11. Scientific Competency	1.26
12. Preconscious Activity (Originality)	1.25
13. Artistic (VPI)	1.20
14. Academic Type	1.20
15. Athletic Competency	1.16
16. Leadership Achievement	1.07

Table 18 (cont.)

Descriptive Scales	Range of Means / Standard Deviation
17. Scientific Potential	1.04
18. Conventional (VPI)	1.02
19. Acquiescence (VPI)	.99
20. Homemaking Competency	.99
21. Government & Social Studies Competency	.95
22. Technical Competency	.92
23. Musical Potential	.91
24. Literary Potential	.89
25. Musical Achievement	.82
26. Enterprising (VPI)	.77
27. Artistic Potential	.72
28. Scientific Achievement	.72
29. Business and Clerical Competency	.71
30. Social and Educational Competency	.71
31. Social (VPI)	.70
32. Leadership and Sales Competency	.70
33. Range of Experience	.70
34. Status (VPI)	.70
35. Dramatic Arts Achievement	.68
36. Realistic (VPI)	.64
37. Arts Competency	.64
38. Interpersonal Competency	.60
39. Dramatic Arts Potential	.59
40. Competencies Total	.53
41. Artistic Achievement	.36

Table 19

Descriptive Scales of the American College Survey

in order of Variability among Colleges for Male Samples

Descriptive Scales	Range of Means / Standard Deviation
1. ACT Composite (both sexes)	2.34
2. Vocational Type	1.80
3. Non-Conformist Type	1.77
4. Dogmatism	1.68

Table 19 (cont.)

Descriptive Scales	Range of Means / Standard Deviation
5. Leadership Potential	1.46
6. Foreign Language Competency	1.41
7. Dramatic Arts Potential	1.39
8. Music Potential	1.33
9. Arts Competency	1.32
10. Artistic Potential	1.27
11. Home Resources	1.21
12. Leadership Achievement	1.20
13. Literary Achievement	1.20
14. Social (VPI)	1.18
15. Collegiate Type	1.18
16. Social and Educational Competency	1.17
17. Artistic (VPI)	1.14
18. Preconscious Activity (Originality)	1.09
19. Total Competencies	1.02
20. Leadership and Sales Competency	.95
21. Academic Type	.94
22. Technical Competency	.92
23. Athletic Competency	.91
24. Scientific Achievement	.86
25. Enterprising (VPI)	.86
26. Artistic Achievement	.82
27. Dramatic Arts Achievement	.82
28. Homemaking Competency	.79
29. Scientific Potential	.78
30. Realistic (VPI)	.77
31. Status (VPI)	.76
32. Musical Achievement	.76
33. Conventional (VPI)	.73
34. Range of Experience	.69
35. Government & Social Studies Competency	.69
36. Acquiescence (VPI)	.68
37. Business and Clerical Competency	.64
38. Intellectual (VPI)	.63
39. Interpersonal Competency	.63
40. Scientific Competency	.56
41. Literary Potential	.36

For both men and women, the ACT composite score, a measure of academic potential, shows the greatest variability across colleges. Other descriptive scales which show substantial variability across colleges for both sexes include vocational orientation, non-conforming orientation, dogmatism, leadership potential, and language competency. To a large degree these distinguishing student characteristics are associated with academic potential and intelligence. The scales of great variability are probably the student attributes which colleges look for in students, explicitly or implicitly, and which students use in their self-selection of colleges. In contrast, student characteristics of small inter-college variability are qualities which are either unrelated to academic promise or are variables which colleges do not employ in admissions decisions. These descriptive variables are those near the bottom of Tables 18 and 19. For example, women do not appear to select colleges, or to be selected by colleges, in terms of their dramatic arts potential, technical interests, artistic competencies and achievements, or interpersonal competencies. The admission of men does not appear to be related to their scientific interests, interpersonal competency, or literary potential.

The range of ACT means (2.3 standard deviations) among our 31 colleges is less than the range of means (4 standard deviations) for the ACE for 200 colleges (McConnell and Heist, 1962) because our sample did not include low-ranking Negro colleges. The exclusion of such colleges from the McConnell and Heist study would reduce their variation to 2.48

standard deviations, a close approximation to our estimate of variation of 2.34.

2 meg.

VI. Educational Implications

The results of the American College Survey serve several purposes: they lend support to earlier work which outlined the diversity among college students and among their colleges (McConnell and Heist, 1962; Astin, 1964; Davis, 1963; Flanagan et al., 1964). The results also extend our knowledge of the diversity among college students, since the American College Survey provided a more comprehensive profile of the typical college freshman and the variation among freshman classes for a single, national sample of students than we have ever had before. Earlier studies have usually been concerned with a small number of student attributes, a small group of colleges, or a small sample of a college's freshman class.

The implications of the present study for high school students seem clear: there is not only a college for almost every level of intellectual capacity, but also there is a college for many configurations of attitudes, outlook, personality traits, interests, and goals. If a student wishes, he can find a college whose student body at least is congruent with many if not most of his personal tastes and needs. The high degree of student satisfaction with their choice of institution suggests that students make appropriate decisions despite the paucity of relevant published information about colleges, although some student reports of satisfaction may only be rationalizations of their institutional decision or the result of limited experience with colleges.

Most investigators have stressed the diversity among student populations, as if differences among students from college to college were about equally variable on all student characteristics. This interpretation was perhaps fostered by the lack of the same information on a single national sample. Our present information clearly suggests that students differ from college to college relatively little on about one half of the descriptive variables (1/3 to 1 standard deviation) and that colleges differ a great deal on about the other half of the descriptive variables (1 to 2.3 standard deviations).

The particular form that this variation among colleges takes is valuable for its implications for students and colleges. The extreme variation for a limited number of variables may represent one outcome of current admission policies and practices; that is, the most variable student characteristics are used both in the admission process and in student's self-selection of colleges. Such student characteristics include a student's academic achievement, conformity, leadership potential, language competency, home resources, and similar personal and background characteristics.

The descriptive scales with small variation among colleges may represent the student qualities which are generally neglected in admissions such as a student's artistic accomplishment, dramatic arts potential, interpersonal competency, musical talent, and other characteristics. Since most student attributes vary relatively little across colleges, most colleges probably provide an equal variety of interpersonal relationships so that despite some marked inter-institutional differences, most students can find congenial companions in any college. If this interpretation has validity, it would explain why most of our students are "satisfied" with their present college (see Table 11).

It is unfortunate that no one has been able to draw together our growing information about college students in a single statement which would be useful to students, parents, college counselors, and educators generally. Without exception, writers of descriptive studies of college students have been obligated either to colleges or their sponsors have been obligated, so that no one has been free to write an explicit, integrated account of what we know about college students and to provide such information college by college. The typical institutional reluctance to accede to a socio-psychological portrayal is understandable in view of the unknown effects of such information, but it seems unlikely that researchers and educators can continue to pretend to the public that we do not have more information about students at different colleges than we currently offer. The class profiles provided by some colleges are a step toward a constructive solution. Such profiles typically lack, however, the very information students and parents want most--the values, interests, and goals of the student body.

Our knowledge of the variation among freshmen implies many ideas for admissions policy and practice. Since students differ on almost any characteristic we have examined, the differential selection and rejection of applicants is a powerful and pervasive tool for shaping the character of a student body. Colleges by relatively simple methods can modify the nature of their entering classes. The admissions process is then not only a powerful process in which it is possible to raise or lower the intellectual level of a student body, but also it is a process in which a college can obtain various combinations of student values, personalities, interests, and goals. Such manipulations are of great importance, since students create a large, and perhaps the largest, portion of the institutional atmosphere. Colleges can remodel their socio-psychological climates by the selection of larger numbers of students with desired traits and by the rejection of more students with less desired traits. In this fashion and over a period of several years, colleges if they wish, can move in those directions that they have established as desirable.

The growing awareness of the potentialities in the admissions function increases the need for colleges to carefully define their objectives and to place the admissions function in the service of such goals. Without a rational integration of the college and its admission service, our new knowledge may only provide an intellectual plaything, and perhaps a destructive one. Without wisdom and clarity of purpose, the acquisition of more student knowledge may result in a formless technology. The use of current admissions tests is a simple problem along side of the future use of more comprehensive information about students. To accomplish this task, a college must have a statement of its goals in plain language, a translation of such goals into practical criteria for admissions, and a comprehensive, consistent plan for the admissions process itself.

Our knowledge of student characteristics may have its greatest value when it is applied to the teaching process and in the development and revision of curricula. The importance of understanding students through an admissions assessment has been made many times before, but only a few have attempted to make explicit some of the potential uses of such information for the teacher. The only thorough-going attempt at this task has been performed by Danskin, Foster, and Kennedy (1964). In their report, The Attitudes and Ambitions of Kansas State Students and Implications for Curriculum Planning, Danskin et al. spell out in specific fashion some of the meanings of student characteristics and background for the college teacher and the planning of curricula. Although numerous studies of the teaching process are available, they are seldom presented in a useable form. The Danskin report makes clear the advantage of simultaneous presentation of student information, interpretation, and practical application. A reading of their report provides an elementary course in the translation of student characteristics into teaching terms. Although the work of the Kansas State team is an auspicious beginning, we need to extend our skill and understanding of this interpretative process, for the collection of more and more information is largely meaningless without a perceptive translation for the solution of intellectual and practical problems.

A careful study of an institution's freshman class should lead to some revision of teaching practice and perhaps institutional goals. For example, it is clear, for our three illustrative institutions (see Tables 14-17 and Figures 1-12) that these diverse student groups have great differences in potentials, goals, interests, and values. Such differences imply great variation in response to teaching methods and orientation to faculty goals. A clinical review of the information for each institution provides an intellectual framework for the evaluation of an institution's current approach to their students. Such information can be employed to learn what student traits can be exploited to facilitate the student's learning and to establish some goals for his personal development. If, for example, a college's students are practically oriented, why not couch more initial training in practical terms but then lead them to more idealistic considerations? If, for example, the typical student is a somewhat dependent person, why not accept his weakness and begin with structured courses but wean him away in a rational, integrated set of steps?

The implications of the variation among freshman classes for the study of a college's influence upon the student are especially important. Once again, it is clear that if we want to learn what a college does to its students we have to know what they were like in the first place. A few simple controls will not produce unequivocal results, since the distribution of students among colleges is unequal for almost every personal attribute that has been examined. Like football coaches, college faculties start their task with students of unequal potentials for personal growth and achievement. Until we perform many more longitudinal studies of student achievement and personal development with appropriate controls, we will not be able to separate the real institutional effects from the folklore about colleges. Only in this rational way will we be able to build a science of higher education and to learn how to foster learning and student development. The sheer accumulation of interesting information about students, or the perceptive observations of visiting humanists are not substitutes for some of the rules of evidence or formal investigations.

At this point we have just begun to explore the potential applications of this new knowledge. It promises more effective ways for assisting a college to attain its goals. It also raises some ethical considerations. We may be able to select students and manipulate college structures for powerful effects. Until recently, our attempts to manipulate students for their own good have usually been quite ineffectual. If, however, we learn how to do a more effective job of molding students, we must also recognize the ethical responsibility to make clear the goals and the values implicit in such manipulations. Only when this information is available will it be possible for students, parents, and faculty to make more rational decisions and judgments about the choice of a college, the selection of students, and the directions that an institution might take.

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